



Superfund Program

January 2006

## Milltown Reservoir Sediments Operable Unit of the Milltown Reservoir/Clark Fork River Superfund Site

# 2005: Reservoir in Review

Looking back, 2005 was a very busy year!

This fact sheet summarizes some of the highlights of the past year and as we look forward to cleanup activities planned for 2006 and beyond. 2006 promises to be even busier!

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### Background of Cleanup Plan

In December 2004, the U.S. Environmental Protection Agency (EPA) and the Montana Department of Environmental Quality (DEQ), released a *Record of Decision* for the Milltown Reservoir Sediments Operable Unit (MRSOU) of the Milltown Reservoir/Clark Fork River Superfund Site near Milltown, Montana. EPA is the lead agency for the MRSOU and DEQ is the supporting agency.

In April 2003, prior to the *Record of Decision*, EPA and DEQ, issued a *Proposed Plan* for cleaning up the Milltown Reservoir. EPA received over 4,000 public comments on that *Original Proposed Plan* from members of the public; numerous groups; local, State, and Federal agencies; the Confederated Salish and Kootenai Tribes (CKST); and the Atlantic

Richfield Company, formerly known as ARCO, a subsidiary of British Petroleum, (the Responsible Parties [RPs]). After reviewing the public comments, EPA made a number of substantial changes to its original proposal and issued a *Revised Proposed Plan* in May 2004. EPA received more than 800 comments, approximately 98 percent of which supported the revised proposal. After reviewing the comments on the *Revised Proposed Plan*, EPA, with concurrence from DEQ, issued the *Record of Decision* for the MRSOU.

### PUBLIC MEETING:

Bonner School Cafeteria in Bonner,  
Montana, from 6:30-8:30 p.m. on  
Wednesday, January 25, 2006

The discussion will focus on  
groundwater, wells, and monitoring  
in the Milltown area.

### Description of the Selected Remedy

EPA's selected remedy for the MRSOU addresses contamination from more than a century of mine waste washing downstream, creating some 6.6 million cubic yards of contaminated reservoir sediments. Those sediments have polluted the local drinking water supply and threaten the local fishery.

The remedy described in the *Record of Decision* provides many benefits:

- Permanent, long-term protection of public health and the environment
- Recovery of the Milltown drinking water supply



- Use of existing waste management areas for waste disposal
- Substantial elimination of contaminant release from ice-scouring and catastrophic events
- Return of two major waterways (the Clark Fork and Blackfoot rivers) to a free-flowing state
- Unrestricted fish passage
- Substantial improvement in the native and recreational fisheries, especially for trout
- Redevelopment possibilities for the area

These objectives will be accomplished by removing the primary source of contaminated sediment in the reservoir, removing the dam to prevent future impoundment of new sediments, and to change hydrologic conditions to accelerate natural attenuation of groundwater contamination. This approach removes the primary contamination source and allows natural attenuation to restore the aquifer over time, and ensures that remaining contaminated material is secured from uncontrolled release. The *Record of Decision* also allows integration of the State and Natural Resources Trustees' Restoration Plan.

## Remediation Goals

The remediation goals (Remedial Action Objectives) include:

- Restore the groundwater to its beneficial use within a reasonable time period using monitored natural attenuation;
- Protect downstream fish and macroinvertebrate populations from releases of contaminated reservoir sediments, which occur with ice scour and high flow events;
- Provide permanent protection against dam failure and the subsequent catastrophic release of contaminated sediments; and
- Provide compliance with the ESA (bull trout fish passage) and wetland protection through consultation with USFWS, the CSKT, and the relevant State agencies.

## Consent Decree

The EPA, The US Department of Justice (DOJ), the State of Montana, the CSKT, and the U.S. Fish and Wildlife Service (USFWS) successfully negotiated an agreement for implementation of the Milltown cleanup and restoration with the Atlantic Richfield Company and NorthWestern Corporation.

Under the Consent Decree, the Atlantic Richfield Company and the NorthWestern Corporation agree to perform the cleanup and some restoration at the Milltown Site as well as providing funds for additional dam removal, historic preservation, bull trout mitigation, removal of the Stimson (Bonner) Dam, mitigation for the State-owned bridge and highway, reimbursement for past federal costs, and reimbursement of future response and oversight costs related to the Milltown project. The State of Montana with money from Atlantic Richfield and NorthWestern will implement most of the restoration plan at the site, which will address channel configuration, revegetation of the floodplain, and other issues.

The Consent Decree was finalized in late summer 2005, and publicly celebrated in early August 2005. It is the final agreement in a long process of studies and reports that led to the selection of a remedy. The Selected Remedy was published in a *Record of Decision* in December 2004. The *Record of Decision* is available on the Internet at: <http://www.epa.gov/region8/superfund/sites/mt/milltowncfr/reservoirou.html>.

## Consent Decree “Motion to Enter”

The DOJ has filed the “Motion to Enter” the Milltown Reservoir Consent Decree with the federal court. The motion contains detailed responses by the U.S. to comments on the Consent Decree received by the DOJ. The State of Montana and the CSKT have concurred on the responses to comments.

- This Consent Decree was signed and publicly celebrated at a press conference



in August 2005. The Consent Decree is an agreement between EPA, the State of Montana, the CKST, and the USFWS and the RPs, ARCO, and NorthWestern Corporation. DOJ regulations and the Superfund law require that the Consent Decree be noticed for public comment by the U.S., and that EPA and the DOJ consider and respond to these comments before sending the Consent Decree to the Federal Judge for final consideration and entry.

- The consent decree lays out the details of who pays for and performs which parts of the cleanup and restoration at the Site.
- This agreement integrates Superfund remediation with site restoration activities into a seamless process that will result in a safe drinking water supply, improved native and sport fishery, and restored Clark Fork and Blackfoot Rivers in southwestern Montana. It also lays the groundwork for future area redevelopment.
- The Motion to Enter the CD and the response to comments were officially filed on January 4, 2006. The next and final step will be for the Federal judge, Samuel Haddon of Great Falls, to sign the Consent Decree if he finds the Decree to be appropriate. Once that occurs, the Consent Decree will go into effect and be legally binding on all parties. The Milltown cleanup project will be engineered and designed in phases, and each phase will be implemented after the EPA and State have approved the designs.

## Design Review Team

A design review team has been formed with the purpose of providing peer review of design documents and public involvement in the design process. Review Design Team Members include: EPA, U.S. Army Corps of Engineers, USFWS, CSKT, DEQ, Natural Resources Damage Program, Atlantic Richfield, Envirocon, Missoula County, and Clark Fork River Technical Assistance

Committee (CFRTAC). Missoula County and CFRTAC represent the public. Members of the public are encouraged to work with either Missoula County or CFRTAC to ensure that their concerns/ideas are raised during Design Review Team meetings. The Design Review Team will review site-related documents, often simultaneously with EPA and DEQ's review, and require a somewhat quick turnaround.

## Draft Remedial Design Work Plan

The Draft Remedial Design Work Plan (RDWP) provides additional detail to the Statement of Work that is an important part of the site Consent Decree. Currently, under review by the Design Review Team, it is expected to be final in 1 month. Receipt of the Preliminary Design Report (PDR) is expected in winter 2006.

## Draft Remedial Action Monitoring Plan

The Draft Remedial Action Monitoring Plan (D-RAMP) has been developed to monitor and track any changes in groundwater, surface water, and sediment transport during the project. Monitoring should begin in summer 2006. Monitoring will continue throughout the project. Upon completion of the remedial construction, a post-project monitoring plan would be conducted. Currently under review by the Design Review Team, the D-RAMP must be finalized before stage drawdown begins (scheduled for October 2006).

## Milltown Reservoir Dam Removal

The Milltown Reservoir Dam will be removed in early 2008. Removal of the Dam will return the Clark Fork and Blackfoot Rivers to a free-flowing state, a condition these rivers have not experienced for nearly 100 years. Five bridges of various ages now cross the Blackfoot River in the vicinity of the Milltown Reservoir. The Montana Highway 200 and Interstate Highway 90 Bridges are three important bridges which EPA will evaluate and reinforce, if necessary. The bridges were designed and built under the influence of the



Milltown Reservoir. Prior to the bridges, the backwater of the reservoir contributed to widespread deposition of sediment (clay, silt, and sand). Existing bridge piers and abutments were constructed on and over these floodplain soils.

At the request of EPA, existing information on local hydrology, hydrogeology, recent hydraulic scour modeling, geotechnical borings (logs and analytical samples), bridge inspection reports, and infrastructure design were compiled and evaluated to determine the risk that removal of the Milltown Dam would place on the structural integrity of the foundations and embankments associated with the three bridges. Structural risks to the infrastructure will be mitigated prior to the removal of the Milltown Dam. The County is working on replacement plans for the pedestrian bridge, and the railroad bridge owners are working on the railroad bridge.

## **Draw Down of the Milltown Reservoir**

The draw down of the Milltown Reservoir began on October 17, 2005 and lasted until just before Thanksgiving. The draw down was extended this year to facilitate removal of the Bonner Dam (aka Stimson Dam) and additional geotechnical investigation of area bridge foundations. This drawdown also provided some insight into what areas may be affected by future draw downs and to work with the community in preparation.



*Photo of Bonner Dam*

## **Bonner Dam Removal**

As a preparatory step to the removal of the Milltown Dam, the Bonner Dam was removed by a cooperative effort led by the US Fish and Wildlife Service and Stimson Lumber Company. Other partners included EPA, Atlantic Richfield Company, NorthWestern, and Trout Unlimited. The removal began in mid-October and was completed before Thanksgiving, ahead of schedule. The dam was removed to approximately 17 feet below crest level. Removal of the aging dam allows fish passage to occur after the Milltown Dam is removed.



*Photo of Bonner Dam Removal*



## Concerns about Domestic Wells

The draw down, which lasted longer than any previous temporary draw down, caused problems for a few Bonner area residents. Residents, primarily in the area immediately adjacent to the Blackfoot River in Milltown and in West Riverside, had some problems with their wells. Previous draw downs did not pose problems for area residents but this draw down lasted longer, and came later in the year than normal. Those residents calling to report problems typically experienced a lowering of the water table, resulting in their pump being stranded above the water. This condition was mitigated and water restored by lowering the pump deeper into the well casing. In shallower wells, other methods were applied to restore water. In each case, EPA responded by paying for the well repair costs upfront or reimbursing residents and will continue to do so if additional problems arise.

This draw down was only temporary; however, in October 2006, EPA expects to permanently lower the Milltown Reservoir by approximately 10 feet and lower the reservoir another 17 feet in late 2007. People whose wells were affected in fall 2005 generally live in the West Riverside area or along the Blackfoot River in Milltown and had wells less than 80 feet deep.

If you live in this area, have a shallow well, or are simply concerned, please contact EPA so we can begin a community well inventory and work together to prevent any disruption in well service. EPA is working to set up a mitigation plan for the Phase I (October 2006) and Phase II (October 2007) permanent draw downs of the Milltown Reservoir. If you would like more information about this, please contact EPA.

## Restoration Plan

The restoration planning for the Clark Fork and Blackfoot Rivers near Milltown Dam has seen significant development since the draft conceptual plan that was first taken to the public in 2003. Extensive field work and

analyses of data in 2004 by the design team allowed the development of a new plan that validated the design concepts and criteria. In April 2005, a panel of four national experts in river restoration and associated fields reviewed and commented on a revised version of the restoration plan. The State integrated the peer reviewers' comments into the revised plan and submitted the *Restoration Plan for the Clark Fork River and Blackfoot River near Milltown - October 2005* to the public for comment. A public meeting was held on November 10, 2005, and there was a public comment period that ended November 16, 2005. The State is currently responding to the public comment received as well as preparing to collect the information and conduct the analyses needed to finalize the restoration design.

The final design is to be completed in winter 2007. The State will be working through the final design process in a manner similar to EPA's remedial design process; local groups representing a wide sector of the public will have an opportunity to provide comments on the restoration design as it is being developed. The State has invited Missoula County, CFRTAC, and the Milltown Redevelopment Group to participate in the review process. In addition, EPA, and their contractor the USACE, will be involved in the review of the final design.

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## Milltown Redevelopment Working Group

In March 2005, the Milltown Redevelopment Working Group (Group) presented its formal recommendations for redevelopment of the Milltown Reservoir area to the Missoula County Commissioners. Later that same month, the Commissioners officially adopted the redevelopment recommendations and



forwarded the report to the appropriate State and Federal agencies. EPA will continue to working closely with the redevelopment group, the State of Montana, and Site Trustees.

The Group continued to meet regularly and presented its ideas for future use of the Milltown Reservoir area to the public at two public meetings in January 2005. The redevelopment ideas were well received by the public, some revisions were made to the draft redevelopment plan, and it was presented to the Missoula County Commissioners in early March. Later that same month, the County Commissioners adopted the Group's Redevelopment Plan. The FY05 Federal transportation bill included \$5 million in redevelopment projects for Missoula and Deer Lodge Counties. New members appointed by the Missoula County Commissioners and existing members affirmed their commitment to the Group. The Group is prioritizing its proposed redevelopment projects based on the remediation work schedule and available funding. The Group continues to meet monthly; and in June, met with Bonner area local emergency responders to discuss the importance of involving local emergency responders, the Bonner School, and the local community in the health and safety plan for the Milltown cleanup. Additional discussions

are planned for 2006 to discuss the following topics: vehicle traffic, railroad traffic, fencing, signage, dust control, river closures/restrictions, local emergency staffing, safe observation points, and lines of communication. The Group wants to work with the local community to develop a "community health and safety plan (HASP)," which is separate from the site HASP.

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### **Missoula County Offers Free Arsenic Testing**

Missoula County is offering free arsenic testing for Milltown/Bonner area residents. Funding is being provided by EPA. EPA has been applying the new arsenic standard (10 parts per billion [ppb]). Since this area is being cleaned up under Superfund, funding is available to resolve any well problems associated with arsenic contamination.

### **Proposed Project Schedule**

The proposed schedule for the Milltown Reservoir/Clark Fork River Superfund Site is shown below.



<b>Milltown Project Schedule</b>					
	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
<b>Remedial Design: Stage 1 Drawdown</b>					
<i>PDR</i>	January				
<i>Draft Final Design Report</i>	May				
<i>Final Design Report for Stage 1 Approved</i>	October				
<b>Remedial Design Site Infrastructure, Grade Control, Bypass Channel Sediment Transportation</b>					
<i>PDR</i>	March				
<i>Draft Final Design Report</i>	July				
<i>Final Design Report for Stage 1 Approved</i>		January			
<b>Remedial Action</b>					
<i>Stage 1 Drawdown</i>	October				
<i>Mobilization and Site Infrastructure</i>		January			
<i>Begin Construction of the Bypass Channel</i>		February			
<i>Stage 2 Drawdown (if bridge work is complete)</i>		October			
<i>Begin Transporting Sediments (by Rail) from Bypass Channel to Opportunity Ponds for Disposal</i>		November			
<i>Begin Demolition of Spillway</i>			February		
<i>Stage 3 Drawdown (River Becomes Free Flowing)</i>			April		
<i>Begin Excavation of Remaining Sediments and Ship to Opportunity Ponds</i>			May		
<i>Finish Sediment Excavation and Hauling of Sediments (by Rail)</i>				June	
<i>Complete construction of Floodplain and Channel--Demobilize</i>					January



*Artist's rendition of post-remedy confluence, looking upstream from the bluff above Milltown Dam*

## For More Information

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